

Creating Asthma-Friendly Schools: A Public Health Approach

Lisa Cicutto, Elizabeth Conti, Helen Evans, Rebecca Lewis, Sue Murphy, K.C. Rautiainen, Sarah Sharrard

CASE STUDY OBJECTIVES

- To assess the needs of schools to help create asthma-friendly schools
- To provide resources and programming to make schools asthma friendly
- To establish partnerships among public health units and school communities to meet the goals of our Creating Asthma-Friendly Schools Resource Kit

SCHOOL DEMOGRAPHICS

The project involves 170 public and Catholic elementary schools across Ontario, Canada. (Catholic schools are part of the Ontario public school system.) The schools represent a mix of urban, suburban, rural, and remote communities and a broad range of socio-demographic characteristics. School sizes range from 100 to 800 students with an average of 400 students and 25 employees per school. Approximately 8% of families come from a variety of other countries and speak a language other than English at home. Over 60% of parents report receiving some postsecondary education. Approximately 85% of families affected by asthma have a drug plan, and over 90% have a family physician.

PROGRAM CONTEXT

The Public Health School Asthma Pilot Project was initiated in response to the increasing burden of childhood asthma in Ontario. A coroner's inquest into the death of a teenage boy who died from asthma recommended that schools provide asthma education to children with asthma. Children with asthma often do not receive asthma education.

Ontario schools have no school nurses and rely on public health nurses. Before this project, public health nurses

consulted on primary health issues to approximately 30-40 schools per nurse. Our project represents a significant change in direction for public health nurses, shifting their focus to asthma and direct service provision to the school community. Each nurse was responsible for implementing the Creating Asthma-Friendly Schools Resource Kit in 17 schools and spent about 50 hours per school on related activities.

To create asthma-friendly schools, we used a 2-pronged intervention—one targeting children with asthma and the other targeting the broader school community. For children with asthma, a public health nurse and a certified asthma educator cofacilitate an asthma education program called the Roaring Adventures of Puff¹ in the school once a week for 6 weeks. For the broader school community, we implement the Creating Asthma-Friendly Schools Resource Kit to create supportive environments for children with asthma. The development and implementation of the resource kit is the focus of this case study.

CASE STUDY

A needs assessment to determine the asthma friendliness of participating schools informed the resource kit development. The questionnaire, which was based on existing literature,²⁻⁵ focused on possible exposure to asthma triggers and asthma management-related issues in the school. We distributed it to 3146 teachers in participating schools and received 1756 completed questionnaires (response rate of 56%). Results revealed that schools present several obstacles to children successfully managing their asthma (Table 1).

In general, teachers did not know which students had asthma, and students with asthma were not allowed to carry inhalers. The needs assessment also noted that 80% of teachers did not feel confident about their ability to handle worsening asthma in school. These results suggested that providing children with the school-based asthma education program, Roaring Adventures of Puff, to develop the knowledge and skills required to manage their asthma was a good first step but that the school environment needed to be addressed as well.

Needs assessment findings resulted in the development of the Creating Asthma-Friendly Schools Resource Kit. The resource kit proposes 7 goals for asthma-friendly schools (Table 2) and provides recommendations and resources for achieving each goal. The kit consists of the following 4 sections—Section 1: Introduction and Background, Section 2: Goals of Asthma-Friendly Schools, Section 3: Checklists and Resources for Creating Asthma-Friendly Schools According to Role, and Section 4: Glossary of Terms and Bibliography. Section 3 provides checklists for how various individuals in the school community (eg, school board members, principals and vice principals, teachers, parents of students with asthma, and students with asthma) can address each goal. User-friendly, easy-to-use resources include supplemental questions for the school registration form, an introductory letter to assist with identifying students with asthma, a school medication

Lisa Cicutto, RN, PhD, ACNP, CAE, Associate Professor (lisa.cicutto@utoronto.ca), Faculty of Nursing, University of Toronto, 155 College Street, Suite 215, Toronto, ON M5T 1P8; Elizabeth Conti, RN, BSN, Public Health Nurse, Asthma Coordinator (lconti@hamilton.ca), Hamilton Public Health & Community Services, 71 Main Street W., Hamilton, ON L8P 4Y5; Helen Evans, RN, BSN, Public Health Nurse, Asthma Coordinator (helen.evans@peelregion.ca), Peel Regional Health Unit, 9445 Airport Road, 3rd Floor, West Tower, Brampton, ON L6S 4J3; Rebecca Lewis, RN, BSN, Public Health Nurse, Asthma Coordinator (lewisr@region.halton.on.ca), Halton Region, 690 Dorval Drive, 6th Floor, Oakville ON L6K 3X9; Sue Murphy, RN, CAE, Faculty of Nursing (jmurphy1485@rogers.com), University of Toronto, 155 College Street, Toronto, ON M5T 1P8; K.C. Rautiainen, RN, BSN, Public Health Nurse, Asthma Coordinator (rautiainenkc@sduh.com), Sudbury & District Health Unit, 1300 Paris St., Sudbury, ON P3E 3A3; and Sarah Sharrard, RN, BSN, Public Health Nurse, Asthma Coordinator (sarah.sharrard@region.durham.on.ca), Durham Region Health Department, Suite 210, Lang Tower, 1615 Dundas Street E., Whitby, ON L1N 2L1. This study was funded by the Ontario Ministry of Health and Long-Term Care. The project team is very grateful to participating schools and their personnel for their assistance and commitment. The views expressed in this article are the views of the authors and do not necessarily reflect those of the Ontario Ministry of Health and Long-Term Care.

authorization form, a form to personalize asthma management at school for parents or guardians to complete, posters addressing worsening asthma, and 9 asthma information articles for publication in school newsletters. A Web site to support resource kit use offers easy access to downloadable resources (<http://www.asthmainchools.com>).

The public health nurses are the primary implementers of the resource kit. A project team of public health nurses, academics, and researchers meets monthly to identify problems, plan next steps, and ensure consistent implementation. The team established excellent partnerships with the Ontario Physical and Health Education Association (Ophea) and the Ontario Lung Association (OLA) and its health professional societies to provide mutual support. Ophea supports the team's work within the school system, especially with teachers. The OLA collaborates with us on development, revision, and dissemination of asthma information resources.

Table 1
Findings of a Needs Assessment Conducted
With Teachers Regarding Their School's
Asthma Friendliness

Asthma-Friendly Characteristics	% (n = 1756)
School has a process for knowing which students have asthma	48
Students can carry inhalers	44
School has a plan for handling worsening asthma	54
The plan identifies	
what to do for worsening asthma	51
whom to call for worsening asthma	48
when to call 911	46
Teachers feel knowledgeable about handling worsening asthma	20

Table 2
Goals for Creating Asthma-Friendly Schools

Goal
An annual process for identifying students with asthma
Easy access to inhalers (preferably carry their own) for children with asthma
A school-wide process for handling worsening asthma
Identification and reduction of common asthma triggers in the school environment
Participation by students with asthma in school activities, including physical activity, to the best of their ability
Learning opportunities for school personnel, parents, and the student body to achieve a better understanding of asthma-related issues in schools
Communication and collaboration among school personnel, families, and health professionals to create and maintain asthma-friendly schools

Our efforts focus on individual schools and their personnel. First steps include meeting with the principal or vice principal to review the asthma-friendliness needs assessment findings, introduce the resource kit by providing a hard copy and the Web site URL, identify goals for the school, and agree on a plan for next steps. Next steps involve implementing an action plan that includes different activities depending on the goal and the school. Below is a description of how we address some of our goals.

A Process for Identifying Students With Asthma

At the beginning of each school year the public health nurses work closely with school support staff to establish a requirement that parents or guardians indicate whether or not their child has asthma or uses an asthma medication. We have encountered 2 common barriers to this process. One barrier is parents' concerns about their child not being allowed to participate in physical activities, such as gym, recess, or field trips, or their child being searched for asthma medications brought to school. The second barrier is a requirement that schools use standardized school board registration forms that do not ask about asthma. To address parents' concerns, the team developed a brief letter explaining to families at the beginning of the school year that the school is creating an asthma-friendly, supportive environment by working with families, school personnel, and health professionals. Families learn that when they inform the school about their child's asthma, they will receive an asthma information package that includes a form detailing how to manage their child's asthma at school and a medication administration form to permit their child to use medication at school. The public health nurses are now working with school boards to revise the standard registration forms so they ask explicitly about asthma and use of asthma medications.

Easy Access to Inhalers

Easy access to inhalers, preferably children carrying their own, has been one of the most difficult obstacles to overcome in Ontario. School newsletters commonly inform parents and students that medications are not allowed at school, often explicitly identifying asthma inhalers. School board policies do, however, include a process that would allow students to carry inhalers. Principals do not always know about the school board's policy and process related to medication use at school. Boards and principals agree that the principal decides how to implement the policy.

One of the nurses' responsibilities is to ensure that principals know about and are comfortable with existing processes for allowing students to carry inhalers. This typically requires a school medication administration form to be completed and signed by the parent or guardian and a physician before the child can carry medication at school. Parents identified securing a physician's signature as a significant obstacle because it requires an appointment with a physician every September and an administrative fee for form completion. To decrease confusion and workload for parents and physicians, the project team tailored the school medication administration forms to include prewritten directions, including medication, dose, delivery, indications (quick relief and prevention of exercise-induced asthma), and need for assistance.

Principals and school personnel often oppose the use of inhalers at school because of concerns about harmful effects if used by children without asthma, liability issues, discomfort with handling medications, and the belief that asthma is not their responsibility but that of parents. To overcome these obstacles, the public health nurses offered school personnel in-service programs about asthma with hands-on use of devices. In addition, as a team (public health nurses, researchers, OLA, and Ophea) we are working with school boards to enforce existing policies and procedures that allow the use of medications.

A School-Wide Process for Handling Worsening Asthma

The needs assessment found that school personnel lack confidence about their ability to recognize and handle worsening asthma. The program annually distributes to teachers and principals legal-size and larger posters developed in collaboration with the OLA for display in schools. The posters describe worsening asthma, the severity of the episode, and steps to take based on severity. The posters complement the workshops for school personnel and efforts to persuade parents to return completed forms for managing asthma at school.

Learning Opportunities for School Personnel, Parents, and Students to Achieve a Better Understanding of Asthma-Related Issues

The program uses several approaches to promote community learning. They include community asthma-awareness evenings, publication of asthma articles in school newsletters, a Web site dedicated to creating asthma-friendly schools, placing asthma-related resources in school libraries, displays at schools and parent councils, posters increasing awareness of asthma issues and the need for physical activity, presentations to a variety of groups within the school community, and interactive drama skits about asthma during school assemblies for the student body and school personnel. Other strategies targeting school personnel include asthma information packages, the posters for handling worsening asthma, and business cards for accessing the resource kit Web site and the OLA's toll-free asthma help-line to have questions answered by certified asthma educators and obtain additional educational resources.

Communication and Collaboration Among School Personnel, Families, and Health Professionals to Create and Maintain Asthma-Friendly Schools

Sustaining Creating Asthma-Friendly Schools requires the involvement and a sense of ownership of many stakeholders. The resource kit provides tools to promote this participation. Public health nurses are the primary coordinators and program implementers but work closely with all partners, constantly scanning the environment and forging new relationships that support the goal of creating and maintaining asthma-friendly schools.

The enactment and enforcement of policies and procedures by school boards, the adherence to policies by schools, parents' efforts to create supportive school environments, and communications between school personnel and parents or guardians are all examples of how various

stakeholders contribute to creating asthma-friendly schools. The process of obtaining completed registration forms inquiring about asthma, managing asthma in school, and administering medication fosters the involvement of parents and health care professionals. Interprofessional educational activities offered through the professional societies of the OLA emphasize the health providers' role in controlling asthma at school. The involvement of organizations, such as the OLA and Ophea, with broad brokering capabilities, content expertise, and ability to respond to the community's informational needs is also key.

Preliminary Evaluation

To date, our project has informal indicators of success. All participating schools used resources in the kit. Interviews with school principals ($n = 72$) lasting approximately 30 minutes revealed that the overwhelming majority found the resource kit extremely easy to use and the resources helpful for attaining project goals. The most frequently used resources were the posters for handling worsening asthma (76%), newsletter articles (70%), the managing-asthma-in-school forms (50%), and the asthma questions on the school registration form (46%). Approximately 45% of schools implemented a process to identify students with asthma. Schools still need help with ensuring easy access to inhalers. Over 85% of teachers attended workshops and in-services, which were rated very favorably. A randomized, controlled evaluation of the intervention is still in progress.

Principals and school personnel clearly communicated that they feel overwhelmed by the delegation of health issues to schools and remarked that the school board, parents, and students also need to support efforts to promote asthma-friendly schools. Based on the preliminary evaluation, the team will continue its work at the individual school level and devote more attention to the school board level.

LESSONS LEARNED

- Needs assessment results gain the attention of schools. Our project conducts a needs assessment at each school and discusses the findings with the principal to identify priorities for that school. We also share results with teachers during in-services to highlight gaps and demonstrate the relevance and need for the Creating Asthma-Friendly Schools program.
- Make the process for creating asthma-friendly schools as easy as possible.
- Be alert for unanticipated barriers and address them early.
- Do not expect the school to develop resources.
- Identify and involve stakeholders or partners early, making clear how they can contribute to the project's success.
- Keep partners involved and committed by providing regular feedback.
- Be patient. Set short- and long-term goals. Recognize that some goals will take years to achieve.
- Working collectively as a team can make great things happen.

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Creating Asthma-Friendly Schools: A Public Health Approach

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Earn .5 CECH Category I CHES, OH0005

Earn .6 Continuing Nursing Education Contact Hours

1. The Public Health School Asthma Project was developed in response to:
 - a) A growing interest in the area of asthma due to the high prevalence.
 - b) The death of a teenage boy as a result of asthma.
 - c) Demand from schools wanting support and information about asthma to support students with asthma at school.
 - d) The addition of asthma as a mandated program within Public Health in Ontario.
 2. One barrier encountered by Public Health Nurses when working with schools on a process to identify students with asthma was:
 - a) Schools felt they did not need a new process to identify students with asthma.
 - b) Parents were hesitant to provide this information for fear that their child would be excluded from school activities.
 - c) The costs for the distribution of forms to parents at each school were prohibitive.
 - d) School administrators and support staff did not have time to address this issue.
 3. The needs assessment conducted with school personnel determined that school personnel:
 - a) Generally knew which students had asthma.
 - b) Supported students use of inhalers at school.
 - c) Understood the seriousness of asthma, and its implications for students at school.
 - d) Did not feel confident in their ability to recognize and handle worsening asthma.
 4. One reason why students' easy access to inhalers has been a difficult obstacle to overcome in Ontario was:
 - a) School board policies held parents responsible for administering medication such as asthma inhalers.
 - b) Principals feared harmful effects if children without asthma used inhalers and liability issues.
 - c) All medications including inhalers were locked up in the principal's office.
 - d) Parents did not want to send an extra inhaler to school.
 5. The primary implementers of the program were:
 - a) Certified Asthma Educators.
 - b) School Nurses.
 - c) Public Health Nurses.
 - d) School Health Promoters.
-

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Answer Sheet (Event 01004)

1. A ☐ B ☐ C ☐ D ☐
2. A ☐ B ☐ C ☐ D ☐
3. A ☐ B ☐ C ☐ D ☐
4. A ☐ B ☐ C ☐ D ☐
5. A ☐ B ☐ C ☐ D ☐

☐ .5 CECH Category I CHES, OH0005

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Instructions

- Select the answer and check the corresponding box on the Answer Sheet. Retain the test questions as your record.
- Complete the Registration, Evaluation, and Payment Information in the space provided.
- Return the Answer Sheet to: Continuing Education Coordinator, American School Health Association, 7263 State Route 43, PO Box 708, Kent, OH 44240; 330/678-4526 (fax).
- 80% constitutes a passing score.
- Please allow 4-6 weeks for processing. For recertification purposes, the date that contact hours are awarded will reflect the date of processing.

Objectives

Learners should be able to: 1) Describe the research or case study; 2) Identify lessons learned from that study; 3) Determine whether the lessons learned apply to their practice; 4) Utilize relevant lessons learned to improve their practice. (Event 01004)

Evaluation *(please circle rating)*

- | | | | | | | | |
|--|----------|---|---|---|---|---|-------|
| 1) The stated objectives were met. | Disagree | 1 | 2 | 3 | 4 | 5 | Agree |
| 2) The content was related to the objectives. | Disagree | 1 | 2 | 3 | 4 | 5 | Agree |
| 3) The content was clearly written. | Disagree | 1 | 2 | 3 | 4 | 5 | Agree |
| 4) The test questions were clearly written. | Disagree | 1 | 2 | 3 | 4 | 5 | Agree |
| 5) The content was related to my practice needs. | Disagree | 1 | 2 | 3 | 4 | 5 | Agree |
| 6) The module was easy to access and use. | Disagree | 1 | 2 | 3 | 4 | 5 | Agree |
| 7) Time it took to review the module and take the test: _____ minutes. | | | | | | | |

Send comments to: Mary Bamer Ramsier, PO Box 708, Kent, OH 44240; mbramsier@ashaweb.org

Registration

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